COMMENTARY

Old water infrastructure, drought cause for concern

Two water supply issues have been front and center in the news recently.

First, the dire need for investment in infrastructure improvements across the nation. Second, record drought in California, with a mandatory 25 percent cutback in water use and a desperate scramble for alternative water supplies.

Closer to home, Agriculture Commissioner Adam Putnam recently called on Florida lawmakers to approve a water policy plan to avoid the types of shortages being experienced in California.

On Sept. 26, the Associated Press reported about the nation's water infrastructure (Drinking water systems imperiled by failing infrastructure), quality and supply. Ryan Foley wrote, "Around the country, scores of decaying drinking water systems built around the time of World War II and earlier are in need of replacement. The costs to rebuild will be staggering. The costs of inaction are already piling up.

The challenge is deepened by drought conditions in some regions and government mandates to remove more contaminants."

"At stake is the continued availability of clean, cheap drinking water – a public health achievement that has fueled the nation's growth for generations," wrote Foley. Fortunately, the situation in Bonita Springs is not so grim. Compared to many throughout the nation, Bonita Springs Utilities (BSU) is relatively young. Since a group of concerned citizens formed BSU in 1971, the water delivery system has grown to serve more than 42,000 connections across a 60-square-mile service territory. The original lime-softening water treatment plant now works in tandem with a modern reverse-osmosis water production facility, which was designed to be expanded as water demand increases.

The water plants are fed by a series of raw-water supply wells. Older wells extend into the shallow Lower Tamiami aquifer to supply the lime-softening plant. For over a decade, water management districts and water utilities have recognized that safe withdrawals from the surficial aquifer are limited in many areas of Florida. BSU undertook construction of deeper wells into the Lower Hawthorn aquifer. This brackish water supply is high in salt and dissolved solids, and requires the more expensive reverse osmosis treatment process. However, alternative water supplies such as this provide a secure, reliable source for the future.

You may have noticed three new wells under construction in town, which will improve the reliability of this supply source.

But the news is not all good. Water from these two facilities is blended and sent to homes and businesses through a network of water distribution pipes. In parts of our service area, underground pipes are more than four decades old. Depending on their composition and location, pipes eventually fail, which can damage roads, disrupt service and force boil-water notices.

The U.S. Environmental Protection Agency estimates that Florida's escalating population and aging water systems will require $16.5 billion in funding during the next two decades to maintain its existing drinking water infrastructure.

To anticipate and react to problems, BSU has a repair and replacement program that identifies areas where older pipes should be replaced. With over 450 miles of water pipes and an aging lime-softening water treatment plant, a growing portion of customer rates must be devoted to system maintenance. On the sewer side, BSU got into the business in the 1990s. However, many of the small package sewer plants that BSU replaced served mobile home parks and neighborhoods with sewer lines decades old. Many such lines already require replacement. Even small breaks in relatively new lines can cause substantial surges at wastewater plants during one of our typical south Florida tropical storms.

Some say the era of cheap water may be ending, as the replacement era begins. I think it may be a matter of perspective. Subject to a modest base charge, BSU members pay $3.66 for every 1,000 gallons of safe drinking water delivered right to their taps.

Consider that the next time you pay $1.50 for a 16-ounce bottle of water at the convenience store.

John R. Jenkins is executive director of Bonita Springs Utilities.